

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. - 25. (Canceled)

26. (New) A method for transmitting an information service in a broadcast transmission system, comprising the following steps:

performing a fragmentation within each of categories representing said information service to create data fragments,

adding signalling information to every data fragment, which signalling information allows a consistent reassembly of said data fragments at a receiver on basis of predefined protocol rules, to create respective broadcast objects, and

transmitting said broadcast objects in an order according to an information content of said data fragment within said broadcast object,

wherein a broadcast object is classified in dependency on the information content of the data fragment carried within said broadcast object, and

a repetition rate of transmitting a broadcast object is dependent on its type.

27. (New) The method according to claim 26, wherein said fragmentation is performed dependent on the information content of the data to be transmitted.

28. (New) The method according to claim 26, wherein said information service comprises a structure with three layers, namely:

service which provides information considered useful for a user when choosing a service among several others;

category which links several items; and

item which carries the information the user is interested in.

29. (New) The method according to claim 26, wherein said fragmentation divides a category horizontally in at least two groups by building groups of item attributes of items of said category according to an importance of said item attributes.

30. (New) The method according to claim 29, wherein four groups of item attributes are built, namely:

a core attributes group which covers a set of the most important attributes, which should be available in a terminal first on average;

a dynamic attributes group which are likely to change with a higher frequency than other attributes;

a main attributes group which covers all remaining item attributes: and

a referenced attributes group which comprises attributes belonging to one of the other three attribute groups which are included therein as reference only and to be transmitted separately.

31. (New) The method according to claim 30, wherein six types of broadcast objects are defined, namely:

service directory containing elementary information about a service;

category directory containing a complete list of all categories within a service;
item directory containing all core attributes of all items of a category;
item dynamic data list containing the dynamic attributes of at least a group of items;
item main data list containing the main attributes of at least a group of items; and
referenced attributes containing one referenced attribute of one item.

32. (New) The method according to claim 31, wherein the signalling information of a service directory broadcast object comprises a protocol version attribute to enable a receiving terminal to check protocol compatibility between the broadcast service and a processing unit in the terminal.

33. (New) The method according to claim 31, wherein a reference to a referenced attribute comprises the ID of the broadcast object carrying the referenced attribute and a version attribute of the referenced broadcast object.

34. (New) The method according to claim 33, wherein in case of an update of a referenced attribute the version attribute of the referenced attribute object and the version of the attribute reference change, or the reference changes by exchanging the identifier and using the version information of the newly referenced attribute.

35. (New) The method according to claim 31, wherein the item directory comprises a version attribute which indicates an update whenever an item set comprising all core attributes of all items of a category changes or the vertical fragmentation changes.

36. (New) The method according to claim 31, wherein the item main data list and the item dynamic data list respectively comprise a version attribute which indicates an update whenever a respective item subset comprising the respective main or dynamic attributes of at least a group of items changes or the vertical fragmentation changes.

37. (New) The method according to claim 31, wherein the category comprises a version attribute which indicates an update whenever a category attribute value or a category attribute cardinality changes.

38. (New) The method according to claim 31, wherein the category directory comprises a version attribute which indicates an update whenever a category set comprising a complete list of all categories within a service changes.

39. (New) The method according to claim 31, wherein the service directory comprises a version attribute which indicates an update whenever the protocol version attribute or a service attribute changes.

40. (New) The method according to claim 30, wherein the item core attributes group, the item main attributes group and the item dynamic attributes group each comprise an own version attribute which indicates an information update whenever an item attribute value or an item attribute cardinality of the respective item attributes group changes.

41. (New) The method according to claim 40, wherein a broadcast object comprising an item of the item core attributes group and of the item directory carries all three version attributes, a broadcast object comprising an item of the item main attributes group carries a main version attribute, and a broadcast object comprising an item of the item dynamic attributes group carries a dynamic version attribute.

42. (New) The method according to claim 26, wherein said fragmentation divides at least parts of a category vertically by building groups of items of said category according to a logical membership of said items.

43. (New) The method according to claim 42, wherein two types of broadcast objects are defined, namely:

item subset directory containing information about all items which are transmitted in a predefined format; and

item subset containing item data of a predefined format.

44. (New) The method according to claim 26, wherein the signalling information of a broadcast object comprises a type attribute indicating a classification of said broadcast object, and/or an ID attribute to distinguish several broadcast objects of a same type of broadcast objects, and/or a version attribute to indicate a change of a certain broadcast object.

45. (New) The method according to claim 26, wherein the signalling information of a broadcast object carrying a fragment of a category comprises a category ID attribute which

specifies uniquely an information category and attributes which allow the defragmentation of the category.

46. (New) The method according to claim 26, wherein said broadcast transmission system is DAB.

47. (New) A method for receiving an information service in a broadcast transmission system, characterized by the following steps:

receiving broadcast objects;
extracting signalling information and a data fragment of every received broadcast object, which signalling information allows a consistent reassembly of said data fragments into an information category of said information service on basis of predefined protocol rules; and
performing a defragmentation within each of categories representing said information service to create said information service.

48. (New) The method according to claim 47, wherein said defragmentation is performed dependent on the information content of said extracted data fragments.

49. (New) A receiver to receive an information service in a broadcast transmission system, comprising:

means for receiving broadcast objects;
means for extracting signalling information and a data fragment of every received broadcast object, which signalling information allows a consistent reassembly of said data

fragments into an information category of said information service on basis of predefined protocol rules; and

means for performing a defragmentation within each of categories representing said information service to create said information service.

50. (New) A method for fragmenting and transmitting an information service in a broadcast transmission system, said information service having a logical structure comprising one or more information categories representative of said information service as well as, for each of said information categories, one or more items representative of the respective information category, and said information service comprising, for each of said information categories, one or more information category data units respectively associated therewith as well as, for each of said items, one or more item data units associated with the respective item and a respective one of said categories, said method comprising the following steps:

grouping, with respect to each of said information categories representing said information service, the item data units associated with the respective information category into a plurality of data fragments respectively comprising one or more of said item data units;

adding, to each of said data fragments so as to create respective broadcast objects, signalling information that allows a consistent reassembly of said data fragments at a receiver on the basis of predefined protocol rules;

determining a transmission order for said broadcast objects on the basis of an information content of the data fragment within the respective broadcast object; and

transmitting said broadcast objects in said transmission order.

51. (New) The method according to claim 50, wherein each of said information category data units comprises information representative of one or more aspects of said respective information category.

52. (New) The method according to claim 50, wherein each of said item data units comprises information representative of one or more aspects of said respective item.

53. (New) A method for receiving and reassembling an information service in a broadcast transmission system, said information service having a logical structure comprising one or more information categories representative of said information service as well as, for each of said information categories, one or more items representative of the respective information category, and said information service comprising, for each of said information categories, information category data respectively associated therewith as well as, for each of said items, one or more item data units associated with the respective item and a respective one of said categories, said method comprising the following steps:

receiving a plurality of broadcast objects, each comprising signalling information and a data fragment, which signalling information allows a consistent reassembly of said data fragments into an information category of said information service on the basis of predefined protocol rules, and which data fragment comprises a group of one or more of said item data units associated with a respective one of said information categories representing said information service;

extracting said signalling information and said data fragment from each of said received broadcast objects; and

reassembling, with regard to one or more of said categories representing said information service, the data fragments associated therewith on the basis of the respective signalling information.

54. (New) A broadcast transmission system for fragmenting and transmitting an information service, said information service having a logical structure comprising one or more information categories representative of said information service as well as, for each of said information categories, one or more items representative of the respective information category, and said information service comprising, for each of said information categories, information category data respectively associated therewith as well as, for each of said items, one or more item data units associated with the respective item and a respective one of said categories, said broadcast transmission system comprising:

means configured and adapted for grouping, with respect to each of said information categories representing said information service, the item data units associated with the respective information category into a plurality of data fragments respectively comprising one or more of said item data units;

means configured and adapted for adding, to each of said data fragments so as to create respective broadcast objects, signalling information that allows a consistent reassembly of said data fragments at a receiver on the basis of predefined protocol rules;

means configured and adapted for determining a transmission order for said broadcast objects on the basis of an information content of the data fragment within the respective broadcast object; and

means configured said adapted for transmitting said broadcast objects in said transmission order.

55. (New) A broadcast receiver system for receiving and reassembling an information service, said information service having a logical structure comprising one or more information categories representative of said information service as well as, for each of said information categories, one or more items representative of the respective information category, and said information service comprising, for each of said information categories, information category data respectively associated therewith as well as, for each of said items, one or more item data units associated with the respective item and a respective one of said categories, said broadcast receiver system comprising:

means configured and adapted for receiving a plurality of broadcast objects, each comprising signalling information and a data fragment, which signalling information allows a consistent reassembly of said data fragments into an information category of said information service on the basis of predefined protocol rules, and which data fragment comprises a group of one or more of said item data units associated with a respective one of said information categories representing said information service;

means configured and adapted for extracting said signalling information and said data fragment from each of said received broadcast objects; and

means configured and adapted for reassembling, with regard to one or more of said categories representing said information service, the data fragments associated therewith on the basis of the respective signalling information.